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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,612

07/02/2003

Marvin Ruffin

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26565 7590 02/08/2007
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EXAMINER

MAY, ROBERT J

ART UNIT

PAPER NUMBER

2885

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/612,612	RUFFIN ET AL.	
	Examiner	Art Unit	
	Robert May	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☒ Claim(s) 1-9, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: the orientation of the top of the substrate and the top of the reflector are inconsistent with each other.

It is suggested that on lines 3, 4 and 5 of Claim 1, "top" be changed to -front- and on line 3 of Claim 1 and in Claim 4, "bottom" be changed to -rear-.

Claim 11 contradicts Claim 1 in the direction the light beam is projected.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Simon (5,897,201).

Regarding Claims 13 and 22, Simon discloses in Figure 5, a reflector comprising a semi-cylindrical front surface (including 12, and the two flat surfaces) having a vertical axis (axis shown extending through light source 2), a back surface with an indentation which covers the light source 2 (visually apparent when reflector is halved along the optical axis of the lamp 2 a bottom indentation exists which surrounds the light source2), a top reflecting surface divided into two quadrants and a bottom reflecting surface

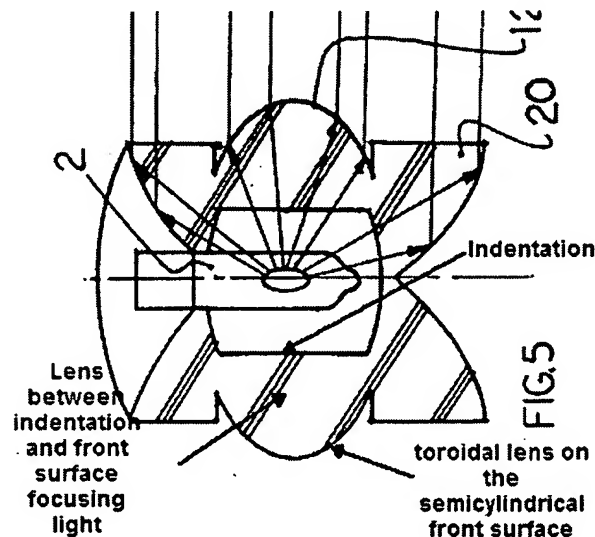
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divided into two quadrants that are symmetrical in shape (the reflector is shown to be quadrilaterally symmetrical when rotated four equal times).

Regarding Claim 22, Simon discloses the reflector curved front surface as being rotationally symmetrical about the vertical axis (central axis as shown in Figure 5 when reflector is rotated 90 degrees).

Regarding Claim 14, Simon discloses in Figure 5, a toroidal lens 12 formed on the semi-cylindrical front surface and shaped to collimate light emitted from the light source (See the marked up figure below).

Regarding Claim 15, Simon discloses in Figure 5, a lens formed between the indentation and semi-cylindrical front surface focusing light emitted by the light source in a horizontal plane (See the marked up figure below).



Regarding Claim 16, Simon discloses in Figure 5, the top and bottom reflecting surfaces as being angled to create total internal reflection (all the light is shown to be reflected).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simon in view of Webb (6,560,039). Simon fails to disclose an aperture on a part of the semi-cylindrical front surface to restrict the angle of light emission. Webb discloses in Figure 4A an aperture 31 on the front curved surface of a reflector 40 for restricting the degree of the light that is emitted through the aperture 31 of the reflector 40 (Col. 5, lines 35-40). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the front semi cylindrical surface of Simon with the aperture as taught by Webb for restricting the degree of the light that is emitted through the aperture 31 of the reflector 40.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon in view of Suckow. Simon fails to disclose the top and bottom reflecting surfaces

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as having a specular reflective layer, however, Suckow discloses in Figure 1A, a light emitting diode light collimating apparatus having a plastic reflector where the reflective surface is a coating such as sputtered aluminum or chrome (Col 5, lines 17-22) which is suitable for providing a reflective surface on a plastic material. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the top and bottom reflecting surfaces with the sprayed aluminum or chrome layer of Suckow so that a reflective surface is provided on the surface.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simon in view of Lewin. Simon fails to disclose the top and bottom portions having facets, however Lewin discloses in Figure 1 a reflector 12 with a faceted type reflector on the top and bottom reflectors (two sides when the module is laid on its side) so that the reflector acts as a Fresnel type reflector to direct the light in the intended direction (Col 2, lines 40-43). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the top and bottom reflector surfaces of Simon with the facets of Lewin so that the reflector can act as a Fresnel type reflector to direct the light in the intended direction.

Response to Arguments

Applicant's arguments and amendments, filed 13 October 2006, with respect to Claim 1 have been fully considered and are persuasive.

Applicant's arguments with respect to claim 13 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

The indicated allowability of claim 14 is withdrawn in view of the newly discovered reference(s) to Simon.

Claims 1-9 and 11-12 would be allowed if rewritten to overcome the stated objections above.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 1, the prior art does not teach or show a substrate having a front surface, a light emitting device located on the front surface of the substrate, a clear reflector with a surface facing the front surface of the substrate, the reflector having a top surface and an opposite and quadrilaterally symmetrical reflecting bottom surface directing the light as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert May whose telephone number is (571) 272-5919. The examiner can normally be reached between 9 am– 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong (James) Lee can be reached on (571) 272-7044. The fax number for

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the organization where this application or proceeding is assigned is (571) 273-8300 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval PAIR system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RM

1/15/07



RENEE LUEBKE
PRIMARY EXAMINER